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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/671,047

09/25/2003

Timothy N. Obce

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6648

26/096

7590

06/19/2008

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EXAMINER

MAYEKAR, KISHOR

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

06/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/671,047

Applicant(s)

OBEE ET AL.

Examiner

Kishor Mayekar

Art Unit

1795

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-8,12,13,16-18,21,22,30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-8,12,13,16-18,21,22,30 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 5, 12, 16-18, 21, 22, 30 and 31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kataoka et al. ("Photocatalytic oxidation in the presence of microwave irradiation: observations with ethylene and water", Journal of Photochemistry and Photobiology A: Chemistry, Volume 148, pp. 323-330, May 31 2002) in view of Greene et al. (US 6,294,772 B1) and/or Homma et al. (US 5,777,300), for reasons as of record. As to the amended limitation that the light source is located completely outside of the enclosure with the porous screen between the light source and the substrate, Kataoka discloses it in Fig. 2, as pointed by the examiner in the last Office action, and paragraph crossings the columns in page 325.
3. Claim 13 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Kataoka as modified by Greene '772 and/or Homma '300 as applied to claims 1, 4, 5, 9-12, 16-18, 21, 22, 30 and 31 above, and further in view of Obee et al. (US 6,358,374 B1), for reasons as of record.

4. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kataoka as modified by Greene '772 and/or Homma '300 as applied to claims 1, 4, 5, 9-12, 16-18, 21, 22, 30 and 31 above, and further in view of Kobayashi et al. (US 6,68,668 B1), for reasons as of record.

Response to Arguments

5. Applicant's arguments filed 14 March 2008 have been fully considered but they are not persuasive.

In response to Applicant's argument that the claimed arrangement having a porous screen and a light source located completely outside of the enclosure with the porous screen between the light source and the substrate is not obvious in view of the cited references, the examiner finds this is to be unpersuasive. Kataoka discloses the claimed arrangement in Fig. 2 and paragraph crossings the columns in page 325. A clear copy of Kataoka is enclosed for reviewing.

As to the argument that the rejection dated 14 December 2007 does not appear to specifically mention claim 9, and wherein the examiner points to Fig. 1 of the Kataoka reference as disclosing the arrangement of Claim 11. To the subject matter of claim 9, since the examiner has pointed to the abstract, the Introduction section, and the Experimental section in which a light source, it is redundant for the examiner to repeat the subject matter of claim 9. To the subject matter of claim 11, the rejection repeated

here has stated that "As to the subject matter of each of claims 10 and 11, Kataoka discloses it in Fig.1 and 2, respectively". It is clear that the examiner has addressed the arrangement of claim 2 by pointing to Kataoka's Fig. 2.

In view of the submission of a terminal disclaimer filed 14 March 2008, the previous rejection of claims on the grounds of nonstatutory obviousness-type double patenting has been withdrawn.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kishor Mayekar/
Primary Examiner, Art Unit 1795